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Attorney's Docket No.: 09857-054001

REMARKS

Applicant is not aware that a request for withdrawal of the finality of the March 22, 2005 office action was requested. What Applicant requested was entry of the amendments in response to the final action, to clarify the issues for the Board on Appeal. Applicant stated in the response filed on June 10, 2005 that:

> Applicant contends that these amendments neither raise
> new issues, nor require an additional search, nor any significant
> consideration by the examiner, and thus should be entered since
> entry of the amendments will simplify issues on appeal.

Applicant is not able to ascertain from the written record whether these clarifying amendments were in fact entered by the examiner. Presuming that the amendments were not entered because the examiner had originally denied entry of these amendments and *sui sponte* re-opened prosecution, Applicant has enclosed herewith the same claim amendments, for which entry is requested.

In addition to the claim amendments previously denied entry, Applicant has also made an amendment to the preamble of claim 1 and a corresponding amendment to the body of claim 1 and deleted the word "basis" in claim 1. Applicant also has made amendments to correct the spelling of "arbitragable" in claims 23 and 28.

Rejection under 35 U.S.C. 101

The examiner rejected claims 1-32 under 35 U.S.C. 101, as being directed to non-statutory subject mater based on the examiner's application of "Examination Guidelines for Computer-Related Inventions." The examiner stated:

> **As to claims 1-15, the claimed invention is implemented as Non-Functional**
> **Descriptive Material Per Se. "A data structure that represents a financial product"**
> **is considered a non-functional descriptive material. Where certain types of**
> **descriptive material, such as music, literature, art, photographs and mere**
> **arrangements or compilations of facts or data, are merely stored so as to be read or**
> **outputted by a computer without creating any functional interrelationship, either as**
> **part of the stored data or as part of the computing processes performed by the**

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> computer, then such descriptive material alone does not impart functionality either to the data as so structured, or to the computer. Such "descriptive material" is not a process, machine, manufacture or composition of matter. (Data consists of facts, which become information when they are seen in context and convey meaning to people. Computers process data without any understanding of what that data represents. Computer Dictionary 210 (Microsoft Press, 2d ed. 1994).)

In rejecting Appellant's claims directed to a data structure, the examiner states that: "A data structure that represents a financial product" is considered a non-functional descriptive material." The examiner however does not cite any authority for this statement.

Applicant points out to the examiner that Applicant has not claimed non functional descriptive material per se. Rather, claim 1, as originally presented called for "A memory storing a data structure that represents a financial product." A memory is a tangible physical item, and therefore the data structure stored on the memory is embodied in a tangible implementation and directed to statutory subject matter.

Nonetheless, to advance prosecution and to thwart a potential printed matter type rejection, Applicant has amended claim 1 to clarify the practical application of the data structure. As amended, claim 1 calls for the data structure for use with a computer-based method of administering a financial product that is traded on a first marketplace.

As amended, claim 1 is clearly directed to patentable subject matter, for which the examiner must give full patentable weight to the data structure limitations. *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994) sets forth guidelines to be applied by the Patent Office in evaluating claims directed to data structures. In Lowry, the Federal Circuit noted that: "Lowry disclosed a data structure accessible by many different application programs. Lowry's data structure was based upon the 'Attributive data model.' The Attributive data model represents complex information in terms of attributes and relationships between attributes." *Lowry* F.3d at **1582.** After acknowledging that the Board of Patent Appeals and Interferences had reversed the examiner's rejection of Lowry's data structure claims under 35 U.S.C. 101 because Lowry recited a memory, an article of manufacture and a class of invention specifically prescribed by 35 U.S.C. 101, the court turned to the printed matter rejection of those claims as articulated by the Board. In reversing the Board, the Federal Circuit stated:

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More than mere abstraction, the data structures are specific electrical or magnetic *1584 structural elements in a memory. According to Lowry, the data structures provide tangible benefits: data stored in accordance with the claimed data structures are more easily accessed, stored, and erased. Lowry further notes that, unlike prior art data structures, Lowry's data structures simultaneously represent complex data accurately and enable powerful nested operations. In short, Lowry's data structures are physical entities that provide increased efficiency in computer operation. They are not analogous to printed matter. The Board is not at liberty to ignore such limitations.

In accord is *In re Warmerdam*, 33 F.3d, 1354 31 USPQ2d 1754 (Fed. Cir.1994) where the Federal Circuit found claim 5 directed to "a machine, and is clearly patentable subject matter." 33 F.3d at 1360-61, 31 USPQ2d at 1759. In contrast, the Federal Circuit found claims 1-4 and 6 reciting "steps [that] describe nothing more than the manipulation of basic mathematical constructs, the paradigmatic "abstract idea."[1]

Unlike the situation in claims 1-4 and 6 in *Warmerdam* instant claim 1 calls for a memory storing a data structure that represents a financial product, the data structure for use with a computer-based method of administering the financial product. Thus, claim 1 by reciting "a memory" and a data structure functionally related to the substrate, i.e., memory recites statutory subject matter under 35 U.S.C. 101, which is entitled to full patentable weight. As in Lowry, these claims are: "More than mere abstraction, the data structures are specific electrical or magnetic structural elements in a memory." *Lowry*, 32 F.3d at 1583-1584.

Accordingly, claim 1 is directed to a practical application of the data structure namely, a computer-based method of administering a financial product that is traded on a first marketplace. Claim 1 therefore does not encompass non functional descriptive material, such as music, literature, art, photographs and mere arrangements or compilations of facts or data, because the data structure in conjunction with the computer-based method of administering a financial

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[1] "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.

product provides a functional interrelationship between the data structure and the substrate, i.e., memory on which the data structure is embodied.

Claims 2-15 are proper under 35 U.S.C. 101 at least for the reasons discussed for claim 1.

Accordingly, the rejection of claims 1-15 as directed to non-statutory subject matter should be removed.

Claims 16-32

The examiner in rejecting claims 16-32, argued that the claimed invention "manipulates an abstract idea without practical application in the technological arts, because the claimed invention does not produce a "useful, concrete and tangible result."

Independent claims 16, 17, 18 and 24 are all directed to: "A computer-based method of administering a financial product (or a first fund)" and recite positive steps of "administering in a computer system" and/or calculating in the computer.

The claimed invention accomplishes the practical application of administration of a financial product or a first fund. This is a useful, concrete and tangible result as required by *State Street Bank & Trust Co. v. Signature Financial Group*, 149 F.3d 1368, 1373, 47 USPQ2d at 1601-02 (Fed. Cir. Jul. 23, 1998). Administration of a financial product or a first fund possesses sufficient "real world" value for which patent protection should be granted. The claimed methods are embodied as computer implemented methods with steps performed by a computer and thus, per se, are not directed to an abstract idea or concept, or simply a starting point for future investigation or research. (See Brenner v. Manson, 383 U.S. 51 9, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1 197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)).

Applicant's claims and specification describe a practical application for the claimed invention, i.e. administration of a first fund to be arbitragable with a second fund, a clearly useful invention to investors and the financial community.

The examiner argues that according to *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358, 50 USPQ2d 1447, 1452 (Fed. Cir. 1999) a claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the

method recites a step or act of producing something that is concrete, tangible and useful. The examiner however fails to explain why Applicant's steps of "administering in a computer system a first fund" (Claim 16) or "calculating in the computer, the net asset value of the first fund ... (Claims 17, 18 and 24)" ... are not directed to something tangible and useful, e.g. determining the net asset value of the first fund, based on the closing prices of a second fund, which it is arbitragable against.

The examiner also fails to address why the machine limitations in each of these claims fails to satisfy the reasoning of *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601 and *In re Alappat* 33 F.3d 1526, 1544, 31 USPQ2d 1545, 1557 (Fed. Cir. 1994)

Indeed in *State Street*, the patent in issue was:

> generally directed to a data processing system (the system) for implementing an investment structure which was developed for use in Signature's business as an administrator and accounting agent for mutual funds. In essence, the system, identified by the proprietary name Hub and Spoke®, facilitates a structure whereby mutual funds (Spokes) pool their assets in an investment portfolio (Hub) organized as a partnership. This investment configuration provides the administrator of a mutual fund with the advantageous combination of economies of scale in administering investments coupled with the tax advantages of a partnership. *State Street* 33 F.3d at 1370.

The Federal Circuit in *State Street* 33 F.3d at 1373 reasoned that:

> The Supreme Court has identified three categories of subject matter that are unpatentable, namely "laws of nature, natural phenomena, and abstract ideas." Diehr, 450 U.S. at 185. Of particular relevance to this case, the Court has held that mathematical algorithms are not patentable subject matter to the extent that they are merely abstract ideas. See Diehr, 450 U.S. 175, passim; Parker v. Flook, 437 U.S. 584 (1978); Gottschalk v. Benson, 409 U.S. 63 (1972). In Diehr, the Court explained that certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some

> type of practical application, i.e., "a useful, concrete and tangible result." <u>Alappat</u>, 33 F.3d at 1544, 31 USPQ2d at 1557.
>
> Unpatentable mathematical algorithms are identifiable by showing they are merely abstract ideas constituting disembodied concepts or truths that are not "useful." From a practical standpoint, this means that to be patentable an algorithm must be applied in a "useful" way. In <u>Alappat</u>, we held that data, transformed by a machine through a series of mathematical calculations to produce a smooth waveform display on a rasterizer monitor, constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it produced "a useful, concrete and tangible result"--the smooth waveform.

In *State Street* the Federal Circuit held that "the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces "a useful, concrete and tangible result"--a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades. The Federal Circuit reasoned that the Supreme Court acknowledged that Congress intended 35 U.S.C. 101 to extend to "anything under the sun that is made by man." *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) to give full effect to Congress's intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in 101. *State Street* 33 F.3d at 1373. Indeed the subject matter of claims 16-32 is directed to the same type of subject matter that the Federal Circuit found to be statutory subject matter.

The examiner concludes that claims 1-32 are non-statutory "because they are directed solely to Non-Functional Descriptive Material Per Se." However, the examiner provides no reasoning or rationale to support this naked conclusion. Rather, the examiner ignores that the claims recite computer-implemented methods and steps performed by a computer and that the claims produce a "useful, concrete and tangible result." The burden is on the examiner to show that the claims do not produce the "useful, concrete and tangible result." The examiner has not satisfied this burden.
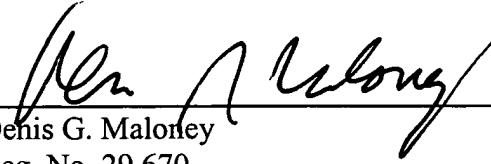
Applicant contends therefore, that the claims are not directed to abstract idea without practical application in the technological arts since each of the claims recite computer implemented steps to produce the "useful, concrete and tangible result." Therefore, in view of the fact that the examiner has searched this case, causing Appellant to appeal and file an Appeal Brief and the examiner elected to respond to Appellant's Appeal Brief with an office action rejecting the claims solely under 35 U.S.C. 101, without reciting any new art, that the case is now in condition for allowance.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 3/24/06

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